



Reflections from a College hybrid learning project

In April 2020, the College of Science and Engineering launched a project to adapt curriculum delivery across its Schools for the 2020/21 academic session in anticipation of ongoing disruption caused by Covid-19. Over the course of six months, the Technology-Enhanced Learning (TEL) Project supported preparations for hybrid teaching to ensure the viability of its degree programmes and a positive experience for all students as the University moved into a new and uncertain educational climate.

Outputs

The project team developed a SharePoint site as a repository of recommendations and resources identified to support hybrid curriculum delivery, together with outputs from working groups on hybrid teaching technologies and tools, media creation, subtitling and laboratory teaching.

Hybrid Teaching Technologies and Tool Finder

The Finder was created by a group of learning technology staff from across the College to help academic colleagues identify technology-enhanced learning tools to deliver various hybrid teaching activities both synchronously and asynchronously. The working group was chaired by Meredith Corey, the E-Learning Developer from the School of GeoSciences and member of the Curriculum Development Group:

"I'm less of an expert in using a lot of the tools than some of the other members, so I worked to pull together the instructions and guidance they shared to draft the Finder. Alex Burford built it and together we finalised and published it for everyone. It was useful having the crossover between the two governance groups represented in the working group. I was aware of conversations happening at the development and pedagogical side that helped us understand users' needs for the tools we were looking into. Other people were members of the Implementation Group so there was a good exchange of ideas and information.

I'm proud of what we did and we got some positive feedback from a range of staff users. It gave all of us working on the Project a good chance to explore the tools available and focus on which met our needs and identify any gaps in central provision. It was frustrating to realise how limited the centrally-supported tools are in some ways, especially thinking about how many online programmes we run. Many of them are not great for community building or student engagement in teaching sessions. I think some academic staff would have liked us to expand the Finder to include tools that weren't centrally supported. I would like to keep using something like it – with updates for the coming academic year. It's a good quick reference guide. However, with the almost constant changes in the past year, it was going to be impossible to keep up-to-date.

Some colleagues have done amazing things this year. It's hard to tell how much of this was supported by the TEL Project and how much was just keen people going out and exploring things for themselves. I do think a lot of people want to keep some of the things they've introduced this past year even once we return to on-campus full time."

Media Creation Guidance

Guidance on media creation was produced by a group of technical and learning technology staff from across the College to support academic colleagues pre-record content. The report outlined hardware and software recommendations for different types of video and considered recording locations, accessibility and procurement, together with tips and useful links. The working group was chaired by Mike Johnstone, the Website and Publications Officer in the School of Chemistry and member of the Implementation Group:

"Within Chemistry the outputs from the working group were useful for our academic staff in guiding their choice of technology and approach to recording lectures. Most people were happy to have some information on the options available and some practical guidance on how to record lectures and experiments as there wasn't a lot of readily accessible, easily digestible guidance like that previously.

The main lesson from my experience is that it's possible to pull together useful information and outputs in a relatively short space of time. The small size of the project team and the large amount of autonomy we were given definitely helped with that. Keeping the team small and focused on a very specific remit while having a tight deadline meant that we were generally very focused on the end user goal. In terms of what we could have done better, I think we probably needed to have a clearer idea of user needs than we did at the beginning. Some of the work we put into some of the more advanced methods of content creation were not well used because the target audience simply didn't have time to engage with them once the preparation for teaching was underway.

The main change this year has been an increase in high-quality recorded teaching material. Staff were confident enough to try producing material without much support staff time being needed. Even as we transition back to more traditional teaching methods I think the experience and confidence staff gained creating recorded content will have a lasting impact. I think we will now more readily record revision sessions for exams, for example, and the use of videos to prepare students for practical classes will increase over the next few years. I think recorded content is now seen by more academics as another tool for delivering teaching rather than being seen purely as a replacement."

Learn Foundation Interns

The College funded the appointment of 10 fixed-term Learn Foundation interns to supplement the 20 appointed by ISG in order to provide additional resource to Schools to support preparations for the new session. Alex Burford, a Learning Technologist from the School of Informatics, managed their intern who was later appointed as a Media Studio Assistant:

"Ruairi was initially employed by College to provide additional support to the Learn Foundations project. It soon became clear that he was capable and willing to widen the scope of his remit and utilise his considerable skills to provide wide ranging support. He was eager to take on new challenges and took ownership of problems with ease. Ruairi migrated hundreds of videos from various platforms to others. He also developed an efficient workflow for editing existing lecture recordings and publishing them for a new audience, and often a new platform. He took on the not inconsiderable challenge of resolving a flickering video issue which affected nearly all Informatics 1A videos from the 2019/20 session, and which were required to be reused for 2020/21, by designing a novel solution and then finding the most efficient way to compress the resulting file.

We were so impressed with Ruairi we extended his contract with us for six months, during which time he provided invaluable support, primarily in the important field of the captioning of our video assets. Ruairi performed exceptionally well, in exceptionally difficult circumstances. He was recruited and employed in the middle of a global pandemic where all on boarding and support had to take place online. His efforts were exceptional."

Lessons Learned

The College's Preparing for Curriculum Reform Group reviewed lessons learned to date from hybrid teaching in semester one of 2020/21. Themes that emerged include:

- In-person contact is important, both between students and staff and between students. This includes whole-class sessions, which help students feel part of a collective endeavour and ensure a consistent experience for students.
- Online lectures are likely to have a role to play in alleviating timetabling pressure and the need to double-teach classes with 700+ students. While students value synchronous interactions, pre-recorded lectures with live follow-up can be effective.
- Lecture content needs to be refreshed and updated regularly but updating pre-recorded lectures involves a significant amount of work, as editing video recordings is difficult and time-consuming. This may result in pre-recorded content being used 'as is.'
- Informal interaction and community building e.g. through workshops has proved very difficult to replicate digitally or in hybrid classes (or in person with social distancing).
- There are some situations where online groups have worked more effectively than in-person e.g. the relative ease with which online group meetings can be organised means there can be better group interaction via digital media.
- Many Schools have seen an upsurge of interest in exploring new ways of teaching and have set up various fora to facilitate this. Some Schools have pulled together a team of digital and educational experts and are keen to capitalise on this expertise longer-term.
- Some Schools have created resources to support virtual field trips or identified local alternatives for field trips that would previously have required travel further afield, and are planning to build on this work when in-person teaching returns.
- Students have successfully used their own laptops for digital programming classes; computational labs may not be needed when in-person teaching returns.

Conclusion

Teresa Ironside is Director of Data Science Education at the Bayes Centre. She was a member of the project leadership team, chair of the Curriculum Development Group and one of the College members of the Student Advisory Group within the University's Adaption and Renewal Group.

"This project was important because the timescale to deliver enhanced ways of teaching for September was limited and the project gave Schools the opportunity to learn from each other and bring in additional support whether it be learning technology or media production training. This work supported students in their University experience and ensured an engaging experience for all, regardless of location.

The University of Edinburgh has years of experience with digital education and technology-enhanced learning practices and it was great to see the tools being enthusiastically adopted by an increasing number of courses and seeing the way they can enhance learning. The enthusiasm from academics in ensuring the best possible learning experience for students has been impressive, but they have also been thinking about the community elements of the student journey and how we can best support that."

Learn more and get in touch!

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Project SharePoint: <https://uoesharepoint.com/sites/CSCE/bayes/SitePages/TEL-Project.aspx>